

given, there *is* a very good and sufficient reason. We pronounce *come* with a closure and contraction of the lips and usually during inspiration, *go* with open and protruding lips and usually during expiration. Now many savages point with the lips as we do with the finger, signifying *there*, by protruding the lips in the direction to be indicated; and any one who has seen this curious gesture must be struck with its close similarity to the protrusion of the lips in pronouncing the word *go*. The same difference of the nearly closed or open lips characterises the words for these two ideas in many other languages. In French we have *viens* and *va*, in German *komm* and *geh*, in Italian *vieni* and *vai*, showing that words in distinct languages differing greatly in spelling and pronunciation may yet have a common character in the mode of speaking which indicates their common meaning.

The five following chapters treat of the Arts of Life, a subject which Mr. Tylor has to a great extent made his own, and which he discusses in a very interesting manner. The doctrine of development in the arts is however somewhat strained when it is implied that the modern gun is an outgrowth of the South American or Indian blow-tube; while the origin of bank notes, and the account of the rise and progress of mathematics are hardly anthropology.

The next two chapters discuss the ideas of savage man as to the spirit-world, and the origin and development of myths; while the final chapter gives an admirable sketch of man as a social being, and of the development of that complex organism, Society. This thoughtful chapter cannot be epitomised, but the reader will find in it much curious information as to the sources of many of the customs, laws, and observances of civilised life, which are shown to be often traceable among the lowest savages. The following passage will serve to illustrate the author's style and treatment of his subject:—

"Much of the wrong-doing of the world comes from want of imagination. If the drunkard could see before him the misery of next year with something of the vividness of the present craving, it would overbalance it. Oftentimes in the hottest fury of anger, the sword has been sheathed by him across whose mind has flashed the prophetic picture of the women weeping round the blood-stained corpse. The lower races of men are so wanting in foresight to resist passion and temptation, that the moral balance of a tribe easily goes wrong, while they are rough and wantonly cruel, much as children are cruel to animals through not being able to imagine what the creatures feel. What we now know of savage life will prevent our falling into the fancies of the philosophers of the last century, who set up the 'noble savage' as an actual model of virtue to be imitated by civilised nations. But the reality is quite as instructive, that the laws of virtue and happiness may be found at work in simple forms among tribes who make hatchets of sharpened stones and rub sticks together to kindle fire. Their life, seen at its best, shows with unusual clearness the great principle of moral science, that morality and happiness belong together—in fact that morality is the method of happiness."

The reader who wishes to know what is the outcome of modern research into the nature, characteristics, and early history of man; and into his progress in the arts of life, in morality, and in social economy, will find a store of valuable information and much suggestive remark in this carefully-written but unpretending volume.

ALFRED R. WALLACE

NOTES

WITH regard to the forthcoming session of the American Association in Cincinnati, to begin August 17, we have to add to information already given (p. 146) that all the meetings, general and sectional, will be held under one roof, that of the

Music Hall and Exposition Buildings. On the evening of the first day of meeting there will be a citizens' reception. An afternoon is to be devoted to visiting the Zoological Gardens. An exhibition of scientific apparatus, appliances and collections will be held during the Association meeting. The objects displayed will be kept over for the ninth Cincinnati Industrial Exposition in September. After the adjournment of the Association excursions will be organised on the Cincinnati Southern Railroad, and also, it is hoped, to the Mammoth Cave.

THE Prince of Wales is expected to lay the foundation-stone of the Central Institution of the City and Guilds of London Institute, on Monday next, at 3.30 p.m. His Royal Highness and the Princess of Wales were present at the Lord President's reception on Wednesday night at the South Kensington Museum. Prior to the reception the Prime Minister and several members of the Cabinet visited the Science Schools.

WE regret to announce the deaths of Dr. E. Zaddach, director of the Zoological Museum at Königsberg, who died on June 5 last; of Dr. Wilhelm Gottlob Rosenhauer, Professor of Philosophy at Erlangen University, who died on June 13, aged sixty-eight (on the same day on which Medical Science lost Josef Skoda at Vienna); of Dr. Matthias Jakob Schleiden, the well-known botanist, and author of many works on natural history (amongst which we may point out as standard works "*Die Pflanze*" and "*Das Meer*"), who died at Frankfurt on June 23, aged seventy-seven; of Dr. Theodor Benfey, Professor of Philosophy at Göttingen University, a celebrated orientalist and linguist, whose death occurred on June 26 at the age of seventy-two; and of Dr. Rudolf Hermann Lotze, Professor of Philosophy at Berlin University, author of the "*Mikrokosmos*," who died on July 1, aged sixty-four years.

MESSRS. SIEMENS have received advice of the completion of the new Atlantic cable recently constructed by them. The reports of insulation and working speed are highly satisfactory. The cable connects Sennen Cove, Land's End, with Dover Bay, Nova Scotia, direct, a length of 2500 nautical miles.

M. PASTEUR has received the Grand Cross of the Legion of Honour.

M. WURTZ, the present president of the Academy of Science, has been appointed Life Senator by a very large majority. This highly-approved appointment raises to three the number of members of the Academy of Sciences who now belong to the Upper House of the French Republic; the two others are M. Robin and M. Dupuy de Lome. M. Berthelot, another member of the section of chemistry, has been proposed for a seat which is at present vacant, and his election is considered quite certain. A large number of the French senators belong to the other section of the Institute, which is now taking such a prominent part in French politics. This influence of the Institute was contemplated by M. Thiers, and his views are advocated principally by Mr. Barthélemy St. Hilaire, the Minister for Foreign Affairs and Member of the Academy.

SIXTY French members of the Congress of Electricians have been appointed by M. Cochéry, the Minister of Telegraphs, who has been made President. M. Ferry, Minister of Public Instruction, has been appointed Vice-President, and four other members of the Cabinet will be chosen by the Congress. The Academy of Sciences and other public scientific institutions will appoint their own representatives, as well as foreign nations.

WE have received the sixth report of Mr. Crookes and Professors Odling and Tidy, to the President of the Local Government Board, on the London Water Supply. It relates to the quality of water supplied from May 20 to June 30, and is highly favourable. "The results of our six months' work" (say the authors),

"and the examination during this period of 1127 samples, enable us to state that as an excellent drinking supply it [*i.e.* the water supplied to London] leaves nothing to be desired."

THE Royal Archæological Institute, of which Lord Talbot de Malahide is president, holds its annual congress at Bedford this year from Tuesday, July 26, to Monday, August 1. Elstow Church, Woburn Abbey, the Roman camp and amphitheatre near Horbury and Sandy, St. Alban's Abbey, and the ruins of Old Verulam, are among the places set out in the programme to be visited.

IN the Archives of the Observatory of Stockholm the assistant, M. Lindhagen, has made a highly interesting discovery. It consists of a copy of a treatise by Copernicus which is more complete than all those known hitherto, and which thus fills a gap in the works left by the great astronomer. The treatise bears the title, "Nicolai Copernici de hypothesis motuum cœlestium a se constitutis commentariolus." It is bound with a copy of Copernicus' "De revolutionibus orbium cœlestium," which formerly belonged to Hevelius, the Danzig astronomer. The treatise, with an introduction by Lindhagen, will shortly be published in the *Transactions* of the Stockholm Academy of Sciences.

THE Annual Report of the Royal Society of New South Wales for 1880 states that thirty-six new members were elected during the year; the actual increase is twenty-two, and the present number of members 452. One honorary member, Sir J. D. Hooker, was elected; and Mr. Hyde Clarke, Major-General Sir E. Ward, and Mr. F. B. Miller were elected corresponding members. The Clarke Medal for 1881 has been awarded to Prof. McCoy of Melbourne University, for his distinguished researches in the Palæontology of Europe and Australia; (Prof. Owen, Mr. G. Bentham, and Prof. Huxley have been the three previous recipients). The finances of the Society are in a satisfactory condition. At the annual meeting on May 4, Prof. Smith, the retiring president, gave an address, in which he reviewed the twenty-five years of the Society's existence (eleven years of which it had the name of the Philosophical Society). Up to 1875 the Society had a somewhat chequered career. It entered the new building that year, and the tide of prosperity still enjoyed is largely due to the zeal and energy of Prof. Liversidge and Dr. Leibius, the secretaries then appointed. During the past year twenty-eight papers were read by thirteen members, many of them involving much laborious research. Mr. H. C. Russell was elected president for the coming year.

CONSIDERABLE progress has been made with the building for the zoological station at Watson's Bay, near Sydney, due to the initiative of Baron MacLay. The building is a neat cottage providing five workrooms and two bedrooms, besides storeroom and bathroom in the basement. It is not intended to make a charge for each table or workroom as at Naples; but every naturalist will be expected to contribute a small sum (say five shillings a week) towards paying a caretaker. Other current expenses will have to be met by subscriptions. The Government has agreed to double the subscriptions for establishing the station up to 300/. The Royal Society of New South Wales may be expected to carry forward the enterprise with spirit, and assistance has been promised by the Royal Society of Victoria and other bodies there.

THE French Government have sent a scientific expedition to Mesopotamia and Assyria. An architect and an engineer accompany the expedition.

AN Astronomical Congress will be held at Strassburg during September next, and will be visited by many eminent astronomers from all parts of the civilised world. Strassburg was chosen because in its new observatory the best and most modern astronomical apparatus are to be found.

It is said that MM. Siemens have renounced the idea of constructing an electrical railway in Paris, as the Municipal Council has not granted to them the concession they required. We believe that the railway which is to be made will be worked with Faure accumulators.

WITH reference to Mr. Newberry's letter on American cretaceous flora, in our issue of 30th ult., we are requested to state that Mr. J. Starkie Gardner is at present travelling in Iceland, and his silence may be thus accounted for.

THE meeting of Austrian Anthropologists and Antiquaries will be held at Salzburg on August 12 and 13 next.

THE Committee of the Liebig Institution at Munich has made an award of two gold medals for 1881: one to Prof. G. Hanssen of Göttingen, the other to Prof. H. Settegast of Berlin, in recognition of their great merit in the furtherance of German agriculture.

THE Berlin Medical Society are now making preparations for celebrating the twenty-fifth anniversary of Dr. von Virchow's professorship. The celebration will probably take place on October 13 next, Virchow's sixty-first birthday.

AN International Alpine Congress will be held at Salzburg in the latter half of August, upon the occasion of the ninth annual meeting of the German and Austrian Alpine Club. The following subjects will probably be discussed:—(1) On the method of surveying Alpine territory and the multiplication of Alpine maps, with an exhibition of maps executed in Bavaria, England, France, Italy, Austria, and Switzerland. (2) On glaciers and the various methods of studying the same, with special reference to the observations at the Rhone glacier and to the glacier-book of the Swiss Alpine Club. (3) On the construction of shelter-huts and their interior arrangement, with an exhibition of models and plans.

AT Hermannstadt a Transylvanian Carpathian Club has just been formed after the model of the German and Austrian Alpine Clubs. Its object is the scientific investigation of the Transylvanian Alps with their glens and caves. The new club numbers a good many members already, and branches have been established at Broos, Kronstadt, Mühlbach, and Schässburg.

AT Leipzig a new Ornithological Society has been formed, which numbers amongst its objects the general protection of birds.

DURING the last days of May the whole neighbourhood of Kamenz was visited by strange guests. Enormous swarms of *Libellula quadrimaculata* passed over the valley, here and there in dense masses, and extending from five to ten miles in breadth. The first swarm arrived about noon on May 30, its passage occupied two hours; in the evening a second swarm came from the direction of Weisswasser. The third swarm arrived on the morning of the 31st. Swarms of this description have not been observed since June, 1825. At Dresden the strange phenomenon was also observed.

A BURIAL-PLACE has been discovered in the neighbourhood of Naumburg, which proves to be a rich store of antiquities. Up to the present some ninety clay vessels and bronze objects have been excavated, amongst which is a very large ash-urn.

IN a peat bog near Triebsee (Stralsund district) a discovery of flint implements has been recently made. Some four or four and a half feet below the surface eight lance-points and fourteen edge tools were found lying in a heap together. Although the whole neighbourhood and the Island of Rügen are rich in objects of the kind, the large size of the present specimens and

the perfection of the workmanship cause general surprise. The objects found have been forwarded to the Stralsund Museum.

THE Thuringian Fisheries Union had a meeting at Jena on June 7, when the Grand Duke was present. The proceedings proved the satisfactory progress of pisciculture in Thuringia.

A NEW commentary to Kant's "Kritik der reinen Vernunft" will be published by Spemann of Stuttgart, upon the occasion of the centenary of that great work. The author is Dr. H. H. Vaihinger of Strassburg, and the commentary will be in four volumes. It will give a detailed explanation of the text, a logical analysis of the contents, and an abstract of all the works published during the century with reference to Kant's master-work.

SIMILAR devastations to those which we reported from the Caucasus some time ago are now caused in Turkey by grasshoppers. The Turkish Government is compelled to employ extraordinary measures to overcome the plague. A particularly voracious species has appeared in the Bodirum district (Smyrna), and the whole population is employed to combat the insects. At Angora all business was suspended for three days by order of the Governor-General, and all the inhabitants were ordered to march out into the fields to destroy the grasshoppers. Every inhabitant was compelled to deliver 20 oka (about $\frac{1}{2}$ cwt.) of dead grasshoppers to the officials. The swarms are said to emanate principally from Persia.

THE Epping Forest and County of Essex Naturalists' Field Club has held three field-meetings this year. On April 2 the Club visited Waltham Abbey under the guidance of Mr. George H. Birch, who communicated a paper on this interesting building. On May 14th the Club united with the Geologists' Association for the purpose of visiting the chalk-pits at Gray's Thurrock. The conductor for the occasion was Mr. Henry Walker, F.G.S. Prof. Morris, who was also of the party, gave a series of most instructive addresses on the ground. The last field-meeting, held on June 25, was microscopical, the conductor being Mr. W. Saville Kent, F.L.S. The Club met at Chigwell, where they were hospitably entertained by the Rev. Linton Wilson, M.A., at Oakhurst. Mr. Kent read a paper entitled "Infusoria—what are they?—their Collection and Investigation." Field-meetings in conjunction with the Hertfordshire Naturalists' Field Club and with the Essex Archaeological Society are under arrangement. The Essex Field Club has recently been making excavations in the ancient earthwork in Epping Forest known as Ambresbury Banks, under the superintendence of General Pitt-Rivers, F.R.S., who will shortly give an account of the results obtained.

IN the Poserna district, between Weissenfels and Lützen, saline springs have been discovered by the Mining Engineer, Herr C. Reyher of Halle. The spring near the village of Poserna comes from an old shaft which is said to be eighty yards deep, but is now filled with *débris*. The water is effervescent. Another spring was discovered near Stösswitz at a depth of 19 metres, and rose with such force that it could only be stopped with great difficulty. Some 100 yards from the latter a third spring was discovered. The water of the three springs is strongly saline, and as they contain principally potash salts, their discovery is valuable. It is now found that during the fifteenth century salt works existed in this neighbourhood.

M. THOREL, President of the General Council of the Seine, has received an official answer to his inquiries relating to the reasons why the Paris gas companies refused to sell their commodity to Parisian aeronauts. It is probable that an arrangement will soon be entered into, and that public ascents will be resumed shortly as in former years, under the supervision of the municipal authorities.

THE Kant Society at Königsberg inaugurated a chapel dedicated to the memory of Kant on June 19. The small Gothic building touches the cathedral on the north side and forms a fitting substitute for the "Stoa Kantiana," which has become useless since the opening of the new University building. The interior of the chapel is formed by a double cross vault. On the left the same tombstone is let into the floor which covered the grave in the "Stoa Kantiana," and which was originally presented by Herr Scheffner. Underneath this the remains of Kant are contained in a double zinc coffin.

AT Zamoly, in the Hungarian Comitatus of Stuhlweissenburg, two tombs have been discovered which contained coins from the time of Diocletian. One was the grave of a boy, the other that of a very tall man. Interesting remains of bas-reliefs and portraits were found in the tombs. They were on pieces of wood; one shows the words "Bibite hoc."

THE *Journal Télégraphique* of Berne, the organ of international telegraphy, has expressed its approval of the proposal to establish an international code for the protection of submarine telegraph property, both during war and peace.

THE German Geometrical Society held its tenth annual meeting at Karlsruhe in the third week of June.

ON the 16th inst. an International Agricultural Exhibition will be opened at Hanover. The exhibitors number over 1600.

MR. MURRAY has in hand, and will shortly publish, the following works of interest to scientific men:—"The Land of the Midnight Sun," being an account of Summer and Winter Journeys through Sweden, Norway, Lapland, and Northern Finland; with Descriptions of the Inner Life of the People, their Manners and Customs, the Primitive Antiquities, by Paul B. du Chaillu. In two vols.; with map and numerous illustrations. "The Formation of Vegetable Mould through the Action of Worms," with Observations on their Habits. By Charles Darwin, F.R.S. "The White Sea Peninsula," a Journey to the White Sea, and the Kola Peninsula. By Edward Rae. With illustrations. "The Life of Sir Charles Lyell," with Selections from his Journals and Correspondence. Edited by his sister-in-law, Mrs. Lyell. With portrait, two vols.

DURING the demolition of some old buildings at 406 and 407, Oxford Street, last week, the workmen on reaching the foundations came on a quantity of old armour and weapons—helmets, breast-plates, spears, swords, and daggers, some very curious in shape. On opening a stone vault they found also some plate, including church utensils, such as a monstrance and a chalice, the workmanship of which is thought to be of the fourteenth century. The monstrance had a Latin inscription.

AN Agricultural Exhibition will be held at Strassburg from September 11-18 next. Over 20000 will be distributed in prizes.

THE additions to the Zoological Society's Gardens during the past week include a Weeper Capuchin (*Cebus capucinus*) from Brazil, presented by Mr. J. S. Chapperton; a Grey Ichneumon (*Herpestes griseus*) from India, presented by Mr. Arthur Tower; a Central American Agouti (*Dasyprocta isthmica*) from Central America, presented by Mr. A. Melhuish; two Pileated Jays (*Cyanocorax pileatus*) from La Plata, presented by Mr. A. A. Dawley; a Berg Adder (*Vipera atropos*) from South Africa, presented by Mr. Borradaile Pillans; a Cullen's Eagle (*Aquila culleni*), South European, eight American Menobranths (*Menobranthus lateralis*) from N. America, purchased; a Common Rhea (*Rhea americana*) from South America, on approval; a Reeves' Muntjac (*Cervulus reevesi*), born in the Gardens; two Scarlet Ibis (*Eudocimus ruber*), three Common Widgeons (*Mareca penelope*), bred in the Gardens.